

EXHIBIT 3

to T-Mobile's Responsive Claim Construction Brief

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

KAIFI LLC,

Plaintiff,

V.

AT&T CORP., AT&T
COMMUNICATIONS, LLC, AT&T
MOBILITY LLC, AT&T SERVICES, INC.,

Defendants.

[illegible]

Case No. 2:19-CV-00138-JRG

MEMORANDUM OPINION AND ORDER

On March 31, 2020, the Court held a hearing via video teleconferencing to determine the proper construction of the disputed claim terms in United States Patent No. 6,922,728 (“the ’728 Patent”). The Court has considered the arguments made by the Parties at the hearing and in their claim construction briefs. (*See* Dkt. Nos. 62, 67, 68.) The Court has also considered the intrinsic evidence and made subsidiary factual findings about the extrinsic evidence. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005); *see also Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The Court issues this Claim Construction Memorandum Opinion and Order in light of these considerations.

TABLE OF CONTENTS

| | | |
|------|--|----|
| I. | BACKGROUND | 3 |
| II. | APPLICABLE LAW | 4 |
| III. | THE PARTIES’ STIPULATED TERMS..... | 7 |
| IV. | CONSTRUCTION OF DISPUTED TERMS | 7 |
| | A. “provides roaming of voice/data signals provided to the user” | 7 |
| | B. “indoor network” and “outdoor wireless internet network” | 10 |
| | C. “indoors” and “outdoors” | 18 |
| | D. “indoor system ID information” | 22 |
| | E. “the data communication terminal may be connected with the indoor network if the registered indoor system ID information is received” | 26 |
| | F. “by connecting with the outdoor wireless internet network if the registered indoor system ID information is not received” | 30 |
| | G. “location information” | 34 |
| | H. “location register” and “the location register” | 37 |
| | I. “the indoor wireless connection module” | 42 |
| | J. “mobile IP” | 46 |
| | K. “a second step of determining whether when indoor system ID information is received by the data communication terminal and the received indoor system ID information is identical to indoor system ID information stored in the location register” | 50 |
| | L. “a fourth step of connecting with the internet network by switching connection of the data communication terminal from the outdoor wireless internet network to the indoor gateway and making wireless communications through the indoor gateway and an indoor wireless connection module” | 54 |
| | M. “a seventh step of switching the connection of the data communication terminal from the indoor gateway to the outdoor wireless internet network and performing the first step again” | 58 |
| V. | CONCLUSION | 60 |

I. BACKGROUND

The '728 Patent, titled "Optimal Internet Network Connecting and Roaming System and Method Adapted for User Moving Outdoors or Indoors," issued on July 26, 2005, and bears an earliest priority date of June 20, 2001. Plaintiff submits: "The claimed invention enables seamless switching of communication services between different network types, an indoor network (e.g., Wi-Fi) and an outdoor wireless internet network (e.g., cellular)." (Dkt. No. 62 at 1.) The Abstract of the '728 Patent states:

The present invention relates to an internet network connecting and roaming system and method providing internet communication service to a data communication carried by a user moving indoors or outdoors. In the present invention, the user is provided with a communication service by connecting with an outdoor wireless internet network such as an outdoor wireless LAN or packet network when the user is located outdoors. Then, upon receiving indoor system ID information, it is determined whether the received indoor system ID information is identical to stored indoor system ID information. If the two indoor system ID informations are identical to each other, the communication route of the data communication terminal is switched from the outdoor wireless internet network to the indoor gateway, and makes wireless communications with the indoor gateway through an indoor wireless connection module. Before the switching of the communication route, the location of the data communication terminal is authenticated by a location register and stored therein.

Claim 1 of the '728 Patent is an illustrative claim and recites the following elements (disputed terms in *italics*):

1. An internet network connecting and roaming system providing internet communication service to a data communication terminal of a user moving *indoors* or *outdoors*, using an *outdoor wireless internet network* including an antenna, a router and *a location register*, and an *indoor network* including an indoor gateway connectable with an internet network, the system comprising:
 - a data communication terminal that includes *an indoor wireless connection module* and stores registered *indoor system ID information*, so that *the data communication terminal may be connected with the indoor network if the registered indoor system ID information is received and by connecting with the outdoor wireless internet network if the registered indoor system ID information is not received*;

- an indoor gateway that includes *an indoor wireless connection module* therein, broadcasts the *indoor system ID information*, makes wireless communications with the data communication terminal through *the indoor wireless connection module*, and is connected with the internet network via a wire;
- a location register* that stores *location information* of the data communication terminal received through the *indoor network* or *outdoor wireless internet network*; and
- a router that determines the location of the data communication terminal stored in *the location register* and *provides roaming of voice/data signals provided to the user* by selecting one of the indoor and the outdoor networks in accordance with the determined location of the data communication terminal.

II. APPLICABLE LAW

A. Claim Construction

This Court’s claim construction analysis is guided by the Federal Circuit’s decision in *Phillips v. AWH Corporation*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the Federal Circuit reiterated that “the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312. The starting point in construing such claims is their ordinary and customary meaning, which “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1312-13.

However, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* at 1313. For this reason, the specification is often “the single best guide to the meaning of a disputed term.” *Id.* at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979–81 (Fed.Cir.1995) (en banc), *aff’d*, 517 U.S. 370 (1996)) (internal quotation marks omitted). However, it is the claims, not the specification, which set forth the limits of the patentee’s invention. *Id.* at 1312. Thus, “it is

improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004). Other asserted or unasserted claims can also aid in determining a claim’s meaning. *See, e.g., Phillips*, 415 F.3d at 1314 (explaining that use of “steel baffles” and “baffles” implied that “baffles” did not inherently refer to objects made of steel).

The prosecution history also plays an important role in claim interpretation as intrinsic evidence of how the U.S. Patent and Trademark Office (“PTO”) and the inventor understood the patent. *Id.* at 1317, *see also Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”); *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1361 (Fed. Cir. 2017) (applying this principle in the context of *inter partes* review proceedings). However, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* at 1318; *see also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (noting that ambiguous prosecution history may be “unhelpful as an interpretive resource”).

Additionally, courts may rely on extrinsic evidence such as “expert and inventor testimony, dictionaries, and learned treatises.” *Id.* at 1317. As the Supreme Court recently explained:

In some cases . . . the district court will need to look beyond the patent’s intrinsic evidence . . . to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.

Teva, 135 S. Ct. at 841. However, the Federal Circuit has emphasized that such extrinsic evidence is subordinate to intrinsic evidence. *Phillips*, 415 F.3d at 1317 (“[W]hile extrinsic evidence can

shed useful light on the relevant art, we have explained that it is less significant than the intrinsic record in determining the legally operative meaning of claim language.” (internal quotation marks omitted)).

B. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA)¹

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 2124. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 2130. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *Id.* at 2130 n.10. “[I]ndefiniteness is a question of law and in effect part of claim construction.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

When a term of degree is used in a claim, “the court must determine whether the patent provides some standard for measuring that degree.” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, “the court must determine whether the patent’s specification supplies some standard for measuring the scope of the [term].” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005); *see also Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (citing *Datamize*, 417 F.3d at 1351).

¹ Because the application resulting in the ’408 Patent was filed before September 16, 2012, the effective date of the America Invents Act (“AIA”), the Court refers to the pre-AIA version of § 112.

III. THE PARTIES' STIPULATED TERMS

The Parties agreed to the construction of the following term in their March 16, 2020 P.R.

4-5(d) Joint Claim Construction Chart.

| Claim Term/Phrase | Agreed Construction |
|--|--|
| "registered indoor system ID information" (Claims 1–3, 5–7, 9–11) | "indoor system ID information for which the data communication terminal has been granted access" |

(Dkt. No. 72-1 at 11.) In view of the Parties' agreement on the proper construction of the identified terms, the Court hereby **ADOPTS** the Parties' agreed constructions.

IV. CONSTRUCTION OF DISPUTED TERMS

The Parties' dispute the meaning and scope of sixteen terms or phrases in the '728 Patent.

Each dispute is addressed below.

A. "provides roaming of voice/data signals provided to the user"

| Disputed Term | Plaintiff's Proposal | Defendants' Proposal |
|---|--|---|
| "provides roaming of voice/data signals provided to the user" | "provides uninterrupted voice/data communication service by automatically switching network paths" | "allows the user's voice/data communications to switch between different network paths" |

1. The Parties' Positions

The Parties agree that this term provides voice/data communications by switching network paths. The Parties dispute whether the construction should include the additional limitations of: (1) "uninterrupted;" (2) "automatically;" and (3) "communication service." Plaintiff argues that the patentee clarified how "roaming" should be construed in the context of the disclosure. (Dkt. No. 62 at 15-16 (citing '728 Patent at 3:13–15, 9:22–23, 10:1–2, 10:53–67, 11:1–3, 11:13–14, 12:4–5, 12:13–14, 12:19–23, 13:61–63, 13:58–60, 14:62–65; Dkt. No. 62-10 at ¶¶ 145–146).) According to Plaintiff, the claimed "roaming" is uninterrupted voice and/or data communication service by automatically switching network paths. (*Id.* at 16.) Plaintiff argues that Defendants'

construction fails to consider how the specification defines this term. (*Id.* (citing Dkt. No. 62-6 at ¶ 27).)

Defendants respond that Plaintiff proposes additional limitations that are not in the claims and are unsupported by the specification. (Dkt. No. 67 at 13-14.) Defendants argue that the role of the claimed “router” is literally to “route” or switch traffic to the indoor or outdoor network depending on the location of the user. (*Id.* at 14 (citing ’728 Patent at 3:42–47, 10:46–52).) Defendants further argue that Plaintiff does not cite anything in the claims or specification that requires a lack of interruption when roaming. (*Id.*) Defendants also argue that Plaintiff quotes excerpts from the specification out of context. (*Id.* (citing ’728 Patent at 11:1–3, 12:19–23).) According to Defendants, there is nothing in the claims or specification in which the router is described as “automatically” switching. (*Id.* at 15.) Finally, Defendants contend that there is nothing in the specification stating that the router alone provides the “communication service.” (*Id.*)

Plaintiff replies that construing roaming as merely switching would read it out of the claims since the claims already recite switching between the networks. (Dkt. No. 68 at 2 (citing ’728 Patent at 2:49–51, 4:35–38, 10:53–56).) According to Plaintiff, “roaming” is not just random. (*Id.* at 3.) Plaintiff argues that the patent specification clearly describes the router and roaming. (*Id.* (citing ’728 Patent at 1:8–16, 2:17–51, 3:9–15, 11:1–6, 11:63–12:24, 13:26–65, 14:62–67).)

2. Analysis

The phrase “provides roaming of voice/data signals provided to the user” relates to asserted Claims 1–3, 5–7, and 9–11 of the ’728 Patent. The Court finds that the intrinsic evidence indicates that the recited “roaming” is switching the network path of the voice/data communications automatically and without interruption. For example, the specification states that “[a]ccording to

the present invention for accomplishing the aforementioned objects, *network paths (i.e. connection paths of a communication network)* capable of connecting with the internet, a PSTN, or the like *are switched* depending on whether a user is located indoors or outdoors.” ’728 Patent at 2:34–38 (emphasis added), *see also id.* at 3:13–15 (“The present invention can *switch network paths* to provide the roaming service in accordance with the location information stored in the location register) (emphasis added), 14:62–67 (“[T]here is another advantage in that the user can safely make a call by automatically providing the roaming service for *changing a communication path* from the indoor network to the outdoor wireless internet network...”) (emphasis added). Accordingly, the Court finds that “roaming” includes switching the network path of the voice/data communications.

Regarding the “uninterrupted” limitation, Defendants argue that Plaintiff does not cite any intrinsic evidence that requires a lack of interruption when roaming. (Dkt. No. 67 at 14). Contrary to Defendants’ contention, the specification states “[t]hrough the above processes, the user who has moved outdoors can continue a mobile communication *without interruption*.” ’728 Patent at 13:61–63 (emphasis added), *see also id.* at 10:63–67 ([T]he call can be made *without interruption* although the user moves indoors. In particular, since the user utilizes the indoor network when he/she is located indoors, the user can *continuously* make the call with the recipient at a lower cost.”) (emphasis added), 12:12–18 (“[T]he internet data communications can be made *without interruption* thereof although the user moves indoors. In particular, since the user utilizes the indoor network when he/she is located indoors, the user can *continuously* make the internet data communications at a lower cost.”) (emphasis added). Accordingly, the Court finds that “without interruption” should be included in the construction.

Regarding the “automatically” limitation, Defendants argue that there is nothing in the

claims or specification in which the router is described as “automatically” switching. (Dkt. No. 67 at 15). The specification states that “when the user who is making the wireless internet data communications moves indoors, the communication connection according to the present invention is *automatically switched* from the wireless internet communications using the outdoor wireless LAN network to the wired internet communications using the indoor network.” ’728 Patent at 12:18–23 (emphasis added), *see also id.* at 11:1–6 (“[T]he present invention can provide the user with the convenience of a call by *automatically switching* the connection to the outdoor mobile communication network when the indoor network is in an abnormal condition or the indoor network cannot be used upon incoming of a call.”) (emphasis added), 14:62–67 (“Further, there is another advantage in that the user can safely make a call by *automatically providing* the roaming service for changing a communication path from the indoor network to the outdoor wireless internet network when the indoor network is in an abnormal condition or the traffic is congested.”) (emphasis added). Accordingly, the Court finds that “automatically” should be included in the construction. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court’s Construction

For the reasons set forth above, the Court construes the phrases **“provides roaming of voice/data signals provided to the user”** to mean **“provides switching the network path of the voice/data communications automatically and without interruption.”**

B. “indoor network” and “outdoor wireless internet network”

| <u>Disputed Term</u> | <u>Plaintiff’s Proposal</u> | <u>Defendants’ Proposal</u> |
|----------------------|---|--|
| “indoor network” | “a wireless network identified by or corresponding to the indoor system ID information broadcast by the indoor gateway” | “wireless network based in a home or building” |

| | | |
|-------------------------------------|--|---|
| “outdoor wireless internet network” | “a (subscriber) network external to the indoor network providing wireless internet connectivity” | “wireless network based outside a home or building” |
|-------------------------------------|--|---|

1. The Parties’ Positions

The Parties agree that “indoor network” and “outdoor wireless internet network” refer to different wireless networks, but disagree on how these networks should be defined. Plaintiff argues that Defendants’ construction fails to provide a meaningful distinction between the two networks. (Dkt. No. 62 at 8.) Plaintiff contends that the intrinsic evidence does not limit the indoor network to being “based in a home or building.” (*Id.* (citing ’728 Patent at 4:66–67, 6:66–67, 8:66–9:2; Dkt. No. 62-10 at ¶¶ 75, 80).) Plaintiff further contends that the placement of the indoor gateway is reflected in Dependent Claim 7, which limits the indoor gateway to “one of a home gateway and an IAD.” (*Id.*) According to Plaintiff, Defendants’ construction improperly limits the claims to an embodiment and violates the principle of claim differentiation. (*Id.* at 9.)

Plaintiff also argues that Defendants’ expert agreed to a number of aspects about the indoor network. (*Id.* at 9-10 (citing Dkt. No. 62-5 at 209:3–7, 200:19–20, 208:17–20, 204:1–14, 205:24–208:20, 209:8–210:2, 196:24–197:6, 196:24–197:6, 248:25–249:4).) According to Plaintiff, the specification describes “indoor network” in terms of where the network is available, not where the equipment is placed. (*Id.* at 10 (citing ’728 Patent at 14:37–48; Dkt. No. 62-10 at ¶¶ 75-79, 80, 82; Dkt. No. 62-5 at 251:8–13).) Plaintiff argues that a person of ordinary skill in the art would not limit “indoor network” just to a home or building. (*Id.* (Dkt. No. Dkt. No. 62.10 at ¶¶ 75, 79–82).)

Regarding the term “outdoor wireless internet network,” Plaintiff argues that the outdoor wireless internet network is repeatedly described as “an external mobile communication network.” (*Id.* at 11 (citing ’728 Patent at 1:36–40, 1:61, 2:30–33, 5:38, 8:41–43).) According to Plaintiff, the outdoor wireless internet network is simply a different network that is external to the indoor network. (*Id.*) Plaintiff also contends that the specification describes the outdoor wireless network

as a “subscriber network.” (*Id.* (citing ’728 Patent at 6:8–9, 6:51–52, 7:55–56, 9:14–15, 5:42–44; Dkt. No. 62-10 at ¶¶ 69–84, 88–103).) Plaintiff further argues that the outdoor wireless internet network need not be geographically different from the indoor network. (*Id.* (citing Dkt. No. 62-10 at ¶ 93).) Plaintiff contends that the specification allows for an indoor network connection even where the outdoor wireless internet network is available. (*Id.* at 12 (citing Dkt. No. 62-10 at ¶¶ 97–100, 174; Dkt. No. 62-5 at 19:16–24).)

Defendants respond that an indoor network is a network based in a home or building, and an outdoor network is based outside a home or building. (Dkt. No. 67 at 5-6 (citing ’728 Patent at 6:8–9, 6:34–36, 6:6–7:5, 14:38–39; Dkt. No. 67-14 at 202:5–24, 203:5–8).) Defendants argue that their constructions have nothing to do with the physical placement of equipment, and that Claim 7 limits the type of network equipment. (*Id.* at 6.) Defendants further argue that they do not dispute that the patent allows the indoor and outdoor networks to overlap in space. (*Id.* at 7.)

Regarding Plaintiff’s construction, Defendants argue that Plaintiff admits its proposals have no association with physical structures. (*Id.*) Defendants contend that Plaintiff’s reliance on circular definitions reads “indoor” and “outdoor” squarely out of the claims. (*Id.* at 7-8 (citing Dkt. No. 67-15 at 98:6–19, 113:15–20, 114:4–12, 122:23–123:8, 126:21–127:6, 176:19–178:11, 182:3–13, 200:20–201:2; Dkt. No. 62-10 at ¶¶ 66–103).) Defendants argue that their construction give “indoor”/“outdoor” their common English meanings. (*Id.* at 9.) Defendants also contend that Plaintiff’s constructions improperly limits outdoor networks to “subscriber” networks. (*Id.*) Finally, Defendants argue that the specification’s invocations of “external” do not limit the “outdoor” network as Plaintiff contends, but rather refer to a different network. (*Id.* (citing ’728 Patent at 8:31–46).) According to Defendants, “external” and “outdoor” are not used interchangeably by the patent. (*Id.*)

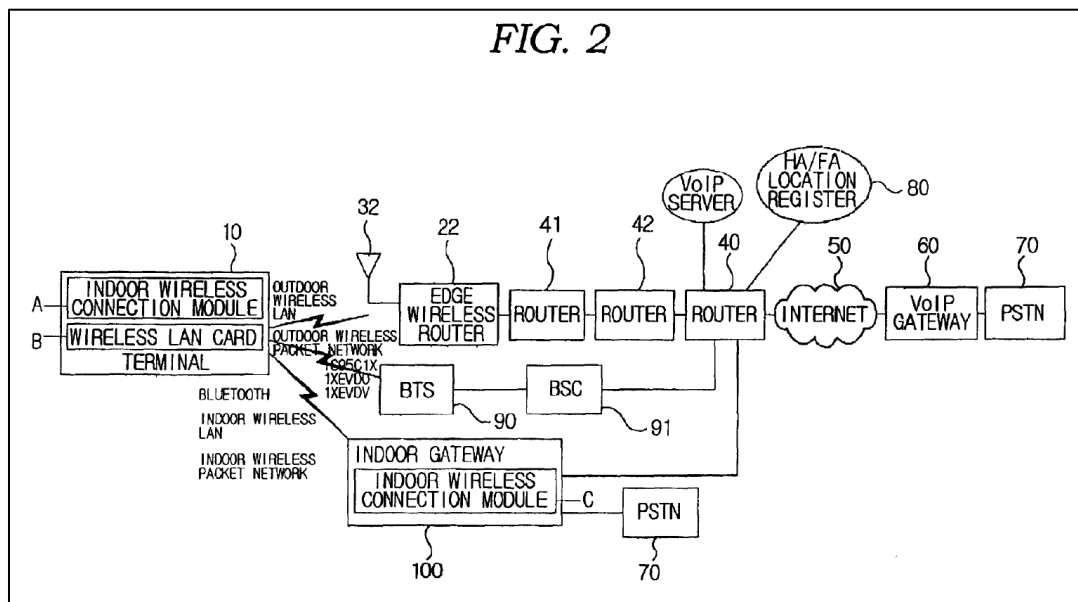
Plaintiff replies that Defendants' constructions provide no meaningful distinction between the two networks. (Dkt. No. 68 at 1.) Plaintiff contends that its constructions give these technical terms precise meaning as described in the specification. (*Id.* (citing '728 Patent at 1:36–40, 1:61, 2:30–33, 3:16–21, 5:38, 6:8–9, 6:26–28, 6:51–52, 7:55–56, 8:41–43, 9:14–15, 14:37–48).) According to Plaintiff, the specification teaches that the indoor network is characterized by its “range,” and not by being physically located in a building or structure. (*Id.* (citing '728 Patent at 2:60–67, 14:38–42).) Plaintiff argues that there is no circularity because the indoor system ID information is unique. (*Id.*) According to Plaintiff, construing disputed terms in relation to one another is both permissible and proper here. (*Id.*)

2. Analysis

The terms “indoor network” and “outdoor wireless internet network” relate to asserted Claims 1, 5, and 12 of the '728 Patent. The Court finds that the terms are used consistently in the claims and are intended to have the same general meaning in each claim. The Parties agree that the “indoor network” and “outdoor wireless internet network” are different wireless networks. The Court agrees. The specification discloses that one advantage of the disclosed system is that “the user can safely make a call by automatically providing the roaming service for changing a communication path from the indoor network to the outdoor wireless internet network.” '728 Patent at 14:62–65. The specification further states that the “indoor network” is a network that broadcasts system ID information able to be received within an interior of a structure. Specifically, the specification states that “the term ‘indoors’ can mean *the interior of all kinds of constructions such as buildings or houses*. In particular, the term ‘indoors’ can mean any regions within a range capable of *receiving the system ID information of the indoor network* identical to that registered into the data communication terminal.” '728 Patent at 14:39–43 (emphasis added), *see also id.* at

9:1–2 (“The home gateway is generally installed in a house, and the IAD is installed in a building.”). Thus, a person of ordinary skill in the art would understand that the “indoor network” is the network that broadcasts system ID information able to be received within an interior of a structure. *See, e.g.*, ’728 Patent at 13:41–43 (“Then, if the user moves outdoors, the PDA 10 cannot receive the indoor system ID information broadcasted from the indoor gateway 100 (step 538).”).

The specification further states that the term “‘outdoor’ is regarded as a region incapable of receiving the system ID information of the indoor network through the data communication terminal.” ’728 Patent at 14:43–46. The specification explains that an “outdoor wireless internet network” can “support several tens to several hundreds of users and cover a range of several kilometers.” *Id.* at 7:1–5. Thus, the “outdoor wireless internet network” is a different network because it does not broadcast system ID information of the indoor network, but instead provides a different network path to internet connectivity. Figure 2 illustrates an example of an “indoor network” and an “outdoor wireless internet network.”



Id. at Figure 2. Regarding Figure 2, the specification states the following:

FIG. 2 is a block diagram showing the configuration of *the optimal wireless internet*

network connecting and roaming system adapted for the user who moves indoors or outdoors according to the present invention. As shown in FIG. 2, the system of the present invention comprises of *an outdoor wireless LAN network* including the access point 22, the antenna 32 and the router 40 *or the wireless packet network* including the BTS 90, the BSC 91 and the router 40, as shown in FIG. 1; *an indoor network* including an indoor gateway 100; and *an external network* including the location register 80, the internet 50 including a plurality of internet servers, a VoIP gateway 60 and a PSTN.

Id. at 8:32–43 (emphasis added). As the specification indicates, Figure 2 illustrates and identifies four different networks: (1) an “indoor network;” (2) an “outdoor wireless LAN network;” (3) a “wireless packet network;” and (4) an “external network.” Thus, the “indoor network” is a different network from the “outdoor wireless LAN network” and the “wireless packet network,” because it provides a different network path to internet connectivity (*i.e.*, the “external network”).

Turning to the Parties’ constructions, Defendants contend that Plaintiff incorrectly argues that Defendants’ construction depends on “the placement of the network equipment.” (Dkt. No. 67 at 6.) Defendants argue that its constructions have nothing to do with the physical placement of equipment. (*Id.*) According to Defendants, their constructions focus on where the networks primarily serve users. (*Id.*) Defendants also contend that their constructions do not require the indoor and outdoor networks to be “geographically different.” (*Id.* at 7.)

Defendants concede that the specification allows the indoor and outdoor networks to overlap in space. (*Id.*) Thus, Defendants argue that the proposed “based in” and “based outside” do not mean “exclusively in” or “exclusively outside.” (*Id.*) The Court agrees that the specification indicates that the networks can overlap in space, and that the distinction is that the “indoor network” is a network that broadcasts system ID information able to be received within an interior of a structure. However, the Court disagrees that the “outdoor network” should be construed to mean “based outside a home or building.” Defendants’ construction is ambiguous and confusing given that Defendants agree that the networks can overlap in space.

However, the Court agrees with Defendants that Plaintiff's constructions fails to associate the term "indoor" to an interior of a structure, and also fails to adequately distinguish the "outdoor wireless internet network" from the "indoor network." Plaintiff's constructions would expand the scope of the term "indoor network" to include any wireless network, even a network that is not associated with a structure. This would read the term "indoor" out of the claims. Indeed, Plaintiff's expert concedes that a Wi-Fi network set up anywhere, even in an open field with no physical structure would be an "indoor network" simply because it is a LAN. (Dkt. No. 67-15 at 176:19–178:11, 200:20–201:2). This is inconsistent with the specification's repeated description of a user being located indoors, moving from indoors to outdoors, or vice versa:

First, in the present invention, when a user is located indoors, an indoor wireless connection module and an indoor gateway (a gateway such as a home gateway or an IAD disposed in a home or building, or an internet communication apparatus) are used. Further, when the user is located outdoors, an ordinary outdoor wireless internet network is used. Therefore, when the user moves indoors, the present invention allows the connection with the communication network to be switched from the ordinary outdoor wireless internet network to an indoor communication network in which the communication is made through an indoor wireless connection module.

'728 Patent at 4:64–5:8. Plaintiff argues that "patio areas, amusement parks and open-air malls may have indoor gateways and therefore indoor networks." (Dkt. No. 62 at 10). As discussed above, Defendants concede that the specification allows the indoor and outdoor networks to overlap in space, and that their construction of "based in" and "based outside" do not mean "exclusively in" or "exclusively outside." (Dkt. No. 67 at 7.)

To the extent that Defendants argue that the "indoor network" cannot also broadcast system ID information outside an interior of a structure, the Court rejects this argument. The scope of the claims only requires the "indoor network" to broadcast system ID information able to be received within an interior of a structure, and does not preclude a wireless signal that extends beyond the interior of the structure (*e.g.*, an outdoor area, patio area, etc.). Indeed, Defendants agree that "[t]he

wireless signals might extend beyond the walls of the building in some places . . .” (*Id.* at 10.)

Turning to Plaintiff’s constructions, Plaintiff argues the specification “uses indoors and outdoors in a colloquial sense.” (Dkt No. 62 at 10.) Plaintiff’s constructions, however, have nothing to do with the colloquial meaning of “indoor” and “outdoor.” Indeed, Plaintiff’s construction ignores the specification repeated disclosure of the roaming service that allows a user to move from outdoors to indoors and vice versa. *See, e.g.*, ’728 Patent at 11:12–15 (“FIG. 4 is a flowchart illustrating how an automatic connection switching service is provided *when the user moves indoors* during the wireless data communications according to an embodiment of the present invention”) (emphasis added), 12:51–55 (“FIG. 5 is a flowchart illustrating how a connection switching service is provided *when the user moves outdoors* while making a wireless call according to an embodiment of the present invention, wherein the Bluetooth module is used for the indoor wireless connection module.”) (emphasis added).

Plaintiff’s construction also limits outdoor networks to “subscriber” networks. There is no reason to limit the “outdoor wireless internet network” to a “subscriber” network. Similarly, Plaintiff also includes “external” in its construction for “outdoor” network. However, the “external” network in Figure 2 is described separately from the “outdoor” network. *See* ’728 Patent at 8:31–46. Thus, “external” and “outdoor” are not used interchangeably in the specification.

Finally, Plaintiff argues that the placement of the indoor gateway is reflected in Dependent Claim 7. The Court agrees that Dependent Claim 7 provides a further limitation of Claim 1. The Court’s construction does not limit the placement of the indoor gateway. Instead, it only requires that the indoor network broadcasts system ID information able to be received within an interior of a structure. In other words, the scope of the claims allow for equipment located exterior to a structure so long as the broadcast system ID information is able to be received within an interior

of a structure. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

For the reasons set forth above, the Court construes the term **“indoor network”** to mean **“a network that broadcasts system ID information able to be received within an interior of a structure,”** and construes the term **“outdoor wireless internet network”** to mean **“a wireless network that provides a different network path to internet connectivity than the indoor network.”**

C. “indoors” and “outdoors”

| <u>Disputed Term</u> | <u>Plaintiff's Proposal</u> | <u>Defendants' Proposal</u> |
|----------------------|---|---|
| “indoors” | This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction. | “region capable of receiving the system ID information on the indoor network through the data communication terminal” |
| “outdoors” | This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction. | “region incapable of receiving the system ID information of the indoor network through the data communication terminal” |

1. The Parties' Positions

The Parties dispute whether the patentee explicitly defined “indoors” and “outdoors,” as Defendants contend. Plaintiff argues that “indoors” and “outdoors” are not technical terms of art and do not have strictly defined technical usage. (Dkt. No. 62 at 16 (citing Dkt. No. 62-10 at ¶ 165).) Plaintiff contends that the specification indicates that “indoors” more generally reflects the capability of receiving the system ID information of the indoor network. (*Id.* at 17 (citing ’728 Patent at 14:40–48; Dkt. No. 62-10 at ¶¶ 166–167, 169).) Plaintiff argues that the specification does not refer to “outdoors” as the exterior of structures. (*Id.* (citing ’728 Patent at 12:24–45; Dkt No. 62-10 at ¶¶ 173–75).) Plaintiff also contends that Defendants’ construction would improperly

exclude the QoS embodiment, in which the indoor network and outdoor wireless internet network are both available in the same region. (*Id.*)

Plaintiff further argues that “indoors” and “outdoors” never appear in the body of Claim 1. (*Id.* at 18.) According to Plaintiff, “indoors” and “outdoors” are used merely as shorthand to tell the location register when the data communication terminal is connected to the indoor network or not. (*Id.* (citing Dkt. No. 62-10 at ¶ 181).) Plaintiff also argues that Defendants’ attempt to turn colloquial terms into strict technical definitions provides no benefit and creates confusion. (*Id.*) Finally, Plaintiff contends that Defendants’ expert admitted at his deposition that Defendants’ construction creates uncertainty and confusion. (*Id.* at 18-19 (citing Dkt. No. 62-5 at 245:4–251:7, 235:17–237:8).)

Defendants respond that their constructions for “indoors” and “outdoors” adopt the patentee’s own lexicography. (Dkt. No. 67 at 10 (citing ’728 Patent at 14:43–48).) Defendants argue that these definitions make sense because they “ensure that the claimed invention is operative and maximizes the patent’s stated goals, in view of the physical realities of wireless networks.” (*Id.*) According to Defendants, defining the “indoors” and “outdoors” this way allows the terminal to connect to the indoor network wherever it is available, and to fall back to the outdoor network where the indoor network is not available, thereby maximizing the stated benefits of the indoor network. (*Id.* at 11.) Defendants argue that they agree the outdoor network may extend to the indoors. (*Id.* (citing ’728 Patent at 1:61–67, 12:6–12, 6:34–36, 7:1–5, 14:38–48).) Defendants contend that it is the specification that defines the “indoors” and “outdoors” as mutually exclusive. (*Id.* (citing ’728 Patent at 14:43–48).)

Finally, Defendants argue that the plain and ordinary meanings of “indoors” and “outdoors” are the interiors and exteriors of homes and buildings. (*Id.* at 11-12.) Defendants

contend that Plaintiff disconnects “indoor network” from anything to do with the actual indoors. (*Id.* at 12.) Defendants argue that Plaintiff’s positions highlight the inconsistency in its own constructions, and demonstrate that their constructions are correct. (*Id.*)

Plaintiff replies that Defendants’ proposal to construe “indoors” and “outdoors” as mutually exclusive is contradictory. (Dkt. No. 68 at 3.) Plaintiff argues that the passage cited by Defendants indicates what these terms can mean. (*Id.*) Plaintiff further argues that these are non-technical terms. (*Id.* (citing Dkt. No. 62-10 at ¶¶ 165–167.)). According to Plaintiff, there is no genuine evidence that the inventor intended to apply strict technical definitions to words that have a common vernacular usage and understanding. (*Id.*) Plaintiff also contends that Defendants improperly conflate “indoors” with “indoor network,” and “outdoors” with “outdoor wireless internet network.” (*Id.*) Plaintiff argues that the standalone terms are different from the technical terms reciting the networks. (*Id.* at 3-4.)

2. Analysis

The terms “indoors” and “outdoors” relates to asserted Claims 1, 4, 5, and 12 of the ’728 Patent. The Court finds that the terms are used consistently in the claims and are intended to have the same general meaning in each claim. The Court further finds that the specification explicitly states the difference between an “indoor” network and an “outdoor” work. As discussed above, an “indoor network” is “a network that broadcasts system ID information able to be received within an interior of a structure,” and an “outdoor wireless internet network” is “a wireless network that provides a different network path to internet connectivity than the indoor network.” Thus, the previous terms capture the difference between “indoors” and “outdoors.” Moreover, the terms “indoors” and “outdoors” by themselves are not terms of art, and should be given their plain and ordinary meaning. In addition, “indoors” and “outdoors” never appear in the body of Claim 1.

Instead, the terms only appear in the preamble of Claim 1 to indicate the general context of “a user moving indoors or outdoors.” Likewise, when the terms “indoors” and “outdoors” do appear in the body of a claim, they indicate a physical location of the user or terminal, which is the plain and ordinary meaning of the terms. *See, e.g.*, ’728 Patent at Claim 12 (“when the user is located outdoors”), Claim 4 (“the terminal is located indoors . . . the terminal is located outdoors”), Claim 5 (“the location of the terminal . . . has been changed from the indoors to the outdoors . . . the location of the terminal has been changed from the outdoors to the indoors.”).

The Court rejects Defendants’ construction because it would improperly limit the “outdoor wireless internet network” to regions where indoor system ID information is not available. This would exclude from the scope of the claims an outdoor wireless internet network (such as a cellular network) that is present both “indoors” and “outdoors.” Defendants agree “that the patent allows the (wireless signals of the) indoor and outdoor networks to overlap in space.” (Dkt. No. 67 at 11.) Thus, Defendants’ proposal to construe “indoors” and “outdoors” as mutually exclusive is contradictory and confusing. Moreover, Defendants’ construction would also improperly exclude the QoS embodiment, which is the situation where the indoor network and outdoor wireless internet network are both available in the same region. The Court agrees that the patentee provided one possible indication of the differences between “indoors” and “outdoors.” ’728 Patent at 14:43-45. However, this difference is presented and defined in the context of an indoor *network*. Accordingly, the difference between “indoors” and “outdoors” is captured in the disputed terms “indoor network” and “outdoor wireless internet network.”

Moreover, the patentee explicitly stated that “the term ‘indoors’ *can mean* any regions within a range capable of receiving the system ID information of the indoor network identical to that registered into the data communication terminal.” *Id.* at 14:40–43 (emphasis added). Stating

that a word “can mean” something is permissive language and is not an explicit definition. Simply stated, permissive language is not a clear intent to define a term. *GE Lighting Solutions, LLC v. AgiLight, Inc.*, 2014 U.S. App. LEXIS 8202, *6 (Fed. Cir. May 1, 2014) (“The standards for finding lexicography and disavowal are exacting. To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term,’ and ‘clearly express an intent to define the term.’”) (citing *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)). Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court’s Construction

For the reasons set forth above, the terms “**indoors**” and “**outdoors**” will be given their **plain and ordinary meaning**.

D. “indoor system ID information”

| <u>Disputed Term</u> | <u>Plaintiff’s Proposal</u> | <u>Defendants’ Proposal</u> |
|--------------------------------|---|--|
| “indoor system ID information” | “information uniquely identifying the indoor network” | “information identifying the indoor gateway” |

1. The Parties’ Positions

The Parties agree that “indoor system ID information” is “identifying” information that allows the data communication to communicate with the indoor network. The Parties dispute whether the information should identify the indoor “network,” as Plaintiff proposes, or the indoor “gateway,” as Defendants propose. Plaintiff argues that the indoor system ID information allows the data communication terminal to identify and therefore access the indoor network. (Dkt. No. 62 at 12 (citing ’728 Patent at 10:3–4, 11:37, 13:42–43, 14:26–27).) Plaintiff contends that the specification teaches that this identification is unique. (*Id.* (citing ’728 Patent at 8:52–55).) Plaintiff further argues that the specification consistently refers to the broadcasted indoor system

ID information as identifying the network. (*Id.* (citing '728 Patent at 9:26–53, 11:24–25, 12:59–60, 14:41–42, 14:44–45).) According to Plaintiff, the purpose of the identification is to uniquely identify the indoor network because the data communication terminal must be able to distinguish the indoor network from other potentially available networks. (*Id.* at 13 (citing '728 Patent at 14:49–55; Dkt. No. 62-10 at ¶ 109).) Plaintiff also argues that a person of ordinary skill in the art would know the indoor wireless connection module could be a Wi-Fi module. (*Id.* (citing Dkt. No. 62-10 at ¶¶ 112–113; Dkt. No. 62-5 at 185:12–23, 54:8–55:15, 251:8–13).) Plaintiff contends that Wi-Fi uses a service set identifier, or SSID, to uniquely identify the Wi-Fi network. (*Id.* (citing Dkt. No. 62-10 at ¶¶ 114–115, 117).)

Defendants respond that the patentee again acted as his own lexicographer, explicitly stating that the indoor system ID information is “assigned” to the indoor gateway. (Dkt. No. 67 at 12 (citing '728 Patent at 8:52–55).) Defendants contend that the specification explains that the indoor system ID information is broadcast on the indoor network. (*Id.*) According to Defendants, the specification does not ever say that the indoor system ID information identifies or is assigned to the indoor network. (*Id.* at 12-13 (citing '728 Patent at 8:52–55, 11:22–25, 14:46–48).) Defendants argue that the indoor system ID information identifies the hardware (indoor gateway) to distinguish the indoor gateway from other indoor gateways. (*Id.* at 13 (citing '728 Patent at 10:27–30).) Finally, Defendants contend that Wi-Fi and 802.11, are never mentioned and are accused technologies in this case. (*Id.*)

Plaintiff replies that Defendants rely on a single passage that describes indoor system ID information as assigned to the indoor gateway. (Dkt. No. 68 at 2.) Plaintiff contends that what the ID is assigned to and what it identifies are different things in this context. (*Id.*) Plaintiff argues that Defendants’ construction ignores and excludes every written description that states that the indoor

system ID identifies the indoor network. (*Id.* (citing '728 Patent at 9:14–53, 11:24–25, 12:59–61, 14:41–45).) Plaintiff also argues that Defendants attempt to run away from their own expert's testimony that the indoor network and the claim recitation of wireless packet communication technology would encompass a Wi-Fi network. (*Id.* (citing Dkt. 67-14 at 54:8–55:15, 184:4–12).) Plaintiff contends that this demonstrates that its construction is consistent with the technical understanding in the art. (*Id.*) Finally, Plaintiff argues that its construction is not defined as Wi-Fi or SSID. (*Id.*)

2. Analysis

The term “indoor system ID information” relates to asserted Claims 1-4, 12, and 14 of the '728 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The Court further finds that Plaintiff's construction should be adopted. The intrinsic evidence indicates that the indoor system ID information allows the data communication terminal to identify and therefore access the indoor network. '728 Patent at 10:3–4 (describing “the indoor system ID information”), 11:37 (same), 13:42–43 (same), 14:26–27 (same). The specification further teaches that this identification is unique:

Further, the indoor gateway 100 includes an indoor wireless connection module C therein, and *its own unique system ID*, i.e., indoor system ID information, is assigned thereto.

Id. at 8:52–55 (emphasis added). Moreover, the specification consistently refers to the broadcasted indoor system ID information as identifying the network. *Id.* at 9:26–53 (“If it determined that the registered system ID information *of the indoor network* is not received...”) (emphasis added), 11:24–25 and 12:59–60 (referring to “system ID information *of the indoor network*”) (emphasis added), 14:41–42 and 14:44–45 (referring to “system ID information *of the indoor network*”) (emphasis added). Thus, the indoor system ID information is assigned to the indoor gateway and the indoor gateway broadcasts the indoor system ID information to uniquely identify the indoor

network. Indeed, the purpose of the identification is to *uniquely* identify the indoor *network*, because the data communication terminal must be able to distinguish the indoor network from other potentially available networks.

Defendants argue that the patentee again acted as his own lexicographer by explicitly stating that the indoor system ID information is “assigned” to the indoor gateway. (Dkt No. 67 at 12 (citing ’728 Patent at 8:52–55).) The Court disagrees that the patentee acted as his own lexicographer. “To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’ other than its plain and ordinary meaning.” *Thorner v. Sony Computer Entertainment America L.L.C.*, 669 F.3d 1362 (Fed. Cir. 2012) (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). Defendants rely on a single passage that describes indoor system ID information as *assigned* to the indoor gateway. But what the ID is assigned to and what it identifies are different things in this context. This is not lexicography, it is just a description of how the equipment operates. Indeed, Defendants’ construction ignores the entirety of the written description that expressly states that the indoor system ID *identifies the indoor network*. ’728 Patent at 9:14–53, 11:24–25, 12:59–61, 14:41–45. Accordingly, the Court rejects Defendants’ construction. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court’s Construction

For the reasons set forth above, the Court construes the term “**indoor system ID information**” to mean “**information uniquely identifying the indoor network.**”

E. “the data communication terminal may be connected with the indoor network if the registered indoor system ID information is received”

| <u>Disputed Term</u> | <u>Plaintiff’s Proposal</u> | <u>Defendants’ Proposal</u> |
|---|---|---|
| “the data communication terminal may be connected with the indoor network if the registered indoor system ID information is received” | This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction. | “if the registered indoor system ID information is received, the communication connection of the data communication terminal may be always and automatically switched from the outdoor wireless internet network to the indoor network, but only when the quality of the indoor network is better than that of the outdoor wireless internet network after it is checked whether the quality of the indoor network is worse than that of the outdoor wireless internet network” |

1. The Parties’ Positions

The Parties dispute whether the phrase “may be connected” should be construed as “may be always and automatically switched,” as Defendants propose. The Parties also dispute whether the construction of the disputed phrase should include the QoS embodiment. Plaintiff argues that a person of ordinary skill in the art would understand the phrase “may be connected” to indicate that the data communication terminal is capable of connecting with the indoor network if the registered indoor system ID information is received. (Dkt. No. 62 at 24-25 (citing Dkt. No. 62-10 at ¶¶ 232–35).) According to Plaintiff, that is what the specification describes. (*Id.* at 25 (citing ’728 Patent at 1:24–27, 1:27–28, 2:56–57).)

Regarding Defendants’ construction, Plaintiff argues that Defendants fail to proffer any reason why “connected” should be replaced with “switched.” (*Id.*) Plaintiff further argues that the concept of “automatically switched” is part of the construction for “roaming.” (*Id.*) Plaintiff also contends that Defendants’ proposal would confuse a jury by juxtaposing the conflicting descriptors of “may be” and “always.” (*Id.*) Finally, Plaintiff argues that Defendants also propose to inject the

QoS embodiment as a required limitation to the claim. (*Id.*)

Defendants respond that the “present invention” is described as the data communication terminal connecting to the indoor network when it is located indoors, and connecting to the outdoor network when it is located outdoors. (Dkt. No. 67 at 20 (citing ’728 Patent at 1:8–17, 12:24–39).) Defendants argue that this is consistent with the Parties’ agreement that the specification describes an “indoor preferred” system and method. (*Id.* (citing Dkt. No. 62-10 at ¶ 60; Dkt. No. 67-2 at ¶ 27).) Defendants further argue that the specification’s description of the “present invention” requires the data communication terminal to connect to the outdoor network even when it is located indoors, if certain “abnormal” conditions regarding the indoor network are met. (*Id.* (citing ’728 Patent at 11:1–6, 12:24–39).) Defendants also contend that “may be connected” in this limitation refers to this lone scenario whereby the outdoor network is chosen over the indoor network when indoors. (*Id.* at 20-21.) Defendants argue that the specification also does not describe any situation whereby connecting to the indoor network is wholly permissive. (*Id.* at 21 (citing Dkt. No. 62-10 at ¶ 39).)

Plaintiff replies that the inclusion of “the present invention” does not mean that the claims should be limited to the QoS embodiment. (Dkt. No. 68 at 7.) According to Plaintiff, Defendants fail to cite any authority for this proposition, and the Federal Circuit has held to the contrary. (*Id.* (citing *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1336–37 (Fed. Cir. 2011)).)

2. Analysis

The phrase “the data communication terminal may be connected with the indoor network if the registered indoor system ID information is received” relates to asserted Claims 4 and 5 of the ’728 Patent. The Court finds that the phrase should be given its plain and ordinary meaning. A person of ordinary skill would understand that the phrase “may be connected” indicates the data

communication terminal is capable of connecting with the indoor network, if the registered indoor system ID information is received. The specification describes this capability when it states that “a terminal . . . including a chip or device *capable of making a connection* with the internet.” ’728 Patent at 1:24–27 (emphasis added), *see also id.* at 1:27–28 (“each terminal *can be connected* with the internet”) (emphasis added), 2:56–57 (“the user’s wireless internet terminal *can be connected* with an indoor wired LAN”) (emphases added). Indeed, Defendants agree that the phrase “is properly phrased to recite the capability of the claimed system.” (Dkt. No. 67 at 23.)

Regarding Defendants’ construction, Defendants do not offer a persuasive reason why “connected” should be redrafted as “switched.” Moreover, it could be confusing to redraft the terms because “connect” and “switch” are recited as different claim terms. Indeed, as discussed above, the concept of “automatically switched” is part of the construction for “roaming.” Defendants’ construction is also confusing because it includes the conflicting descriptors of “may be” and “always.”

Finally, Defendants also propose importing the QoS embodiment as a required limitation to the claim. According to Defendants, “the ‘present invention’ requires the data communication terminal to connect to the outdoor network even when it is located indoors, if certain ‘abnormal’ conditions regarding the indoor network are met.” (Dkt. No. 67 at 20 (citing ’728 Patent at 1:8–17, 12:24–39).) The Court disagree with Defendants, because the “use of the phrase ‘the present invention’ does not ‘automatically’ limit the meaning of claim terms in all circumstances, and that such language must be read in the context of the entire specification and prosecution history.” *Netcraft Corp. v. eBay, Inc.*, 549 F.3d 1394, 1398 (Fed. Cir. 2008); *see also, Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1336–37 (Fed. Cir. 2011) (no waiver of broader scope “where the references to a certain limitation as being the ‘invention’ are not uniform, or where

other portions of the intrinsic evidence do not support applying the limitation to the entire patent”).

Here, the QoS embodiment is just that, an embodiment, and the claims should not be limited to this one embodiment. Especially given that other embodiments are disclosed. Indeed, the specification further confirms this by stating that “it merely illustrates the preferred embodiments of the present invention only by way of examples. Thus, the present invention should not be limited thereto.” ’728 Patent at 15:2–5. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court’s Construction

For the reasons set forth above, the phrase “**the data communication terminal may be connected with the indoor network if the registered indoor system ID information is received,**” will be given its **plain and ordinary meaning**.

F. “by connecting with the outdoor wireless internet network if the registered indoor system ID information is not received”

| <u>Disputed Term</u> | <u>Plaintiff’s Proposal</u> | <u>Defendants’ Proposal</u> |
|---|--|-----------------------------|
| “by connecting with the outdoor wireless internet network if the registered indoor system ID information is not received” | <p>This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction.</p> <p>To the extent that this term should be construed, its plain and ordinary meaning is: “may be connected with the outdoor wireless internet network if the registered indoor system ID information is not received”</p> <p>This term is not indefinite, does not lack antecedent basis, and is enabled and discernible in the context of the claim. A person of ordinary skill in the art would understand the scope of what is claimed.</p> | Indefinite. |

1. The Parties’ Positions

The Parties dispute whether the claim recites a method step within a system claim, and therefore indefinite under *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). Plaintiff argues that a person of ordinary skill in the art would understand that this element recites a data communication terminal that is capable of connecting with the indoor network if the registered indoor system ID information is received, and is capable of connecting with the outdoor wireless internet network if the registered indoor system ID information is not received. (Dkt. No. 62 at 26 (citing Dkt. No. 62-10 at ¶¶ 239–240).) Plaintiff contends that there is no authority that failing to abide by strict grammatical rules renders a claim indefinite. (*Id.* (citing *Funai Elec. Co. v. Daewoo Elecs. Corp.*, 616 F.3d 1357, 1371–72 (Fed. Cir. 2010)).) Plaintiff further contends that the specification clearly informs a person of ordinary skill in the art as to what is meant. (*Id.* (citing

'728 Patent at 3:30–35).) Plaintiff argues that Defendants' expert conceded at his deposition that there was no indefiniteness as to the technical term itself. (*Id.* at 27 (citing Dkt. No. 62-5 at 216:7–9).)

Defendants respond that Claim 1 recites a method step within a system claim, rendering it and its dependent claims indefinite under *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1383–84 (Fed. Cir. 2005). (Dkt. No. 67 at 23.) Defendants contend that this phrase is directed to the performance of an action by the terminal, and not to a capability. (*Id.*) According to Defendants, this renders the claim indefinite because it is “unclear whether infringement . . . occurs when one creates a[n infringing] system, or whether infringement occurs when the user actually uses [the system in an infringing manner].” (*Id.* (citing *IPXL*, 430 F.3d at 1384).) Specifically, Defendants argue that it is unclear whether a user infringes by creating the claimed system or when the step of “*connecting*” with an outdoor wireless internet network is performed. (*Id.* (citing Dkt. No. 67-3 at ¶ 44; Dkt. No. 67-14 at 215:7–21).)

Defendants further contend that it is not the role of this Court to rewrite claims to save their validity. (*Id.* at 24.) Defendants argue that the facts here are parallel to those in *Sound View Innovations, LLC v. Facebook, Inc.*, No. 16-CV-116, 2017 WL 2221177, at *10 (D. Del. May 19, 2017), in which the court invalidated a claim as indefinite under *IPXL*. (*Id.*) According to Defendants, the patentee knew how to draft a limitation to recite a capability but did not. (*Id.*)

Plaintiff replies that the claim's recitation of “by connecting” describes the data communication terminal's (DCT) capability of connecting to the outdoor wireless internet network. (Dkt. No. 68 at 7-8 (citing '728 Patent at 3:30–35).) According to Plaintiff, the Federal Circuit found claims definite in nearly identical circumstances. (*Id.* at 8 (citing *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1315–16 (Fed. Cir. 2017); *HTC Corp. v. IPCom*

GmbH, 667 F.3d 1270, 1273, 1277–78 (Fed. Cir. 2012)).) Plaintiff argues that Claim 1 does not recite a user’s act of connecting, which Plaintiff contends *IPXL* requires to render the claim a hybrid. (*Id.*) Plaintiff contends that the Federal Circuit finds that a system claim reciting a structural element (*e.g.*, DCT) “performing” functions is not indefinite where the claim is clearly directed to structural capability. (*Id.*)

2. Analysis

The phrase “by connecting with the outdoor wireless internet network if the registered indoor system ID information is not received” relates to asserted Claims 1–3, 5–7, and 9–11 of the ’728 Patent. The Court finds that Claim 1 does not recite a method step within a system claim. Specifically, Claim 1 recites the following related to the capabilities of the data communication terminal:

a data communication terminal that includes an indoor wireless connection module and stores registered indoor system ID information, so that the data communication terminal *may be connected* with the indoor network *if* the registered indoor system ID information is received *and by connecting* with the outdoor wireless internet network *if* the registered indoor system ID information is not received

’728 Patent at Claim 1. Defendants concede that the phrase “may be connected with the indoor network if the registered indoor system ID information is received” is properly phrased to recite the capability of the claimed system. (Dkt. No. 67 at 23.) The Court finds that the term “by connecting” similarly describes the DCT’s capability of connecting to the outdoor wireless internet network, as disclosed by the specification. ’728 Patent at 3:30–35 (“[T]he data communication terminal *may be connected* with the indoor network if the registered indoor system ID information is received and *may be connected* with the outdoor wireless internet network if the registered indoor system ID information is not received”) (emphasis added). The Court recognizes that the disputed claim language is not exactly the same as the specification, but both phrases are parallel descriptions. Indeed, the claim is recited in conditional language that describes two of the DCT’s

capabilities depending on whether an indoor system ID is received.

Defendants argue that Claim 1 recites a method step within a system claim, rendering it and its dependent claims indefinite under *IPXL*. (Dkt. No. 67 at 23.) Defendants are correct that “[a] single patent may include claims directed to one or more of the classes of patentable subject matter, but no single claim may cover more than one subject matter class.” *IPXL*, 430 F.3d at 1384. In *IPXL*, the Federal Circuit found that the respective claims were invalid because they claimed both an apparatus and use of the apparatus *by a user*. *Id.* In contrast to the claims in *IPXL*, Claim 1 does not recite a *user’s* act of connecting, but instead recites the capability of the claimed system.

Indeed, the Federal Circuit has found claims definite in similar circumstances. *See UltimatePointer, L.L.C. v. Nintendo Co.*, 816 F.3d 816, 828 (Fed. Cir. 2016) (“[T]he claims do not reflect an attempt to claim both an apparatus and a method, but instead claim an apparatus with particular capabilities.”); *HTC Corp. v. IPCom GmbH*, 667 F.3d 1270, 1273, 1277–78 (Fed. Cir. 2012) (distinguishing claims that “merely establish those functions as the underlying network environment in which the mobile station operates”). Accordingly, the Court finds that Defendants have failed to prove by clear and convincing evidence that the term is indefinite. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court’s Construction

For the reasons set forth above, the phrase **“by connecting with the outdoor wireless internet network if the registered indoor system ID information is not received,”** will be given its **plain and ordinary meaning**.

G. “location information”

| <u>Disputed Term</u> | <u>Plaintiff’s Proposal</u> | <u>Defendants’ Proposal</u> |
|------------------------|--|--|
| “location information” | <p>This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction.</p> <p>To the extent that this term should be construed, its plain and ordinary meaning is: “locational area or indoor system ID information”</p> | “information on a locational area when the data communication terminal is located outdoors, and indoor system ID information when the terminal is located indoors” |

1. The Parties’ Positions

The Parties dispute whether the term “location information” requires construction. Plaintiff argues that the specification describes “location information” as information on a locational area and indoor system ID information. (Dkt. No. 62 at 21 (citing ’728 Patent at 9:16–21, 4:24–25).) Plaintiff argues that the location register stores both indoor location (locational area) and indoor system ID information. (*Id.* (citing Dkt. No. 62-10 at ¶ 209).) Plaintiff contends that Defendants’ construction requires storing only one or the other type of location information, which improperly excludes a preferred embodiment. (*Id.*)

Defendants respond that the patentee once again acted as his own lexicographer for the term “location information.” (Dkt. No. 67 at 16.) According to Defendants, the specification consistently describes “location information” to mean information on a locational area when the data communication terminal is located outdoors, and indoor system ID information when the terminal is located indoors. (*Id.* (citing ’728 Patent at 3:48–51, 9:16–20).) Defendants further argue that nothing in their construction precludes storing both types of location information. (*Id.* at 17.) Defendants also argue that Plaintiff incorrectly equates “indoor location” to “locational area.” (*Id.*) Defendants contend that the quoted embodiment states that the indoor location includes the indoor system ID. (*Id.*) According to Defendants, Plaintiff is wrong that “the indoor system ID” and

“indoor location” are two different items. (*Id.*)

Plaintiff replies that Defendants concede that a location register may store both locational area and indoor system ID information. (Dkt. No. 68 at 5.) Plaintiff argues that Defendants proffer no reason why the plain and ordinary meaning should be usurped. (*Id.*) According to Plaintiff, “there is no basis for Defendants to play lexicographer by citing a single description of one embodiment.” (*Id.*)

2. Analysis

The term “location information” relates to asserted Claims 1-12 of the ’728 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. As discussed above, the claims are directed to internet network connecting and roaming. To accomplish this objective, “location information” is used, which includes information on a locational area or indoor system ID information. The specification states that “[i]n order to determine whether the wireless internet terminal is located indoors or outdoors, the wireless internet terminal determines whether ID information of an indoor system broadcasted from the indoor gateway is received, and in particular, whether the received ID information of the indoor system is equal to the stored ID information.” 728 Patent 3:16–22.

Claim 1 further recites that the “location register” stores the “location information” that is used to determine the location of the data communication terminal. The specification discloses that “[w]hen the data communication terminal is located outdoors, the location information is information on a locational area; and when it is located indoors, the location information is indoor system ID information.” *Id.* at 3:48–51. Likewise, the specification adds that “information stored in the location register 80 is information on a locational area when the data communication terminal is located outdoors. On the other hand, when the terminal is located indoors, it is indoor

system ID information.” *Id.* at 9:16–20. Thus, the intrinsic evidence indicates that “location information” is “information on a locational area or indoor system ID information.”

The Court rejects Defendants’ construction because it would appear to preclude storing both “location area” and “indoor system ID information.” Defendants argue that “[s]o long as information on a locational area is stored when the data communication terminal is located outdoors, and indoor system ID information is stored when the terminal is located indoors, AT&T’s construction is satisfied.” (Dkt. No. 67 at 17.) However, this condition is already recited in Claim 1.

Specifically, Claim 1 recites “a data communication terminal that includes an indoor wireless connection module and stores registered indoor system ID information, so that the data communication terminal may be connected with the indoor network if the registered indoor system ID information is received and by connecting with the outdoor wireless internet network if the registered indoor system ID information is not received.” Accordingly, the Court finds that the term “location information” should be construed to mean “information on a locational area or indoor system ID information or both” Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court’s Construction

For the reasons set forth above, the Court construes the term **“location information”** to mean **“information on a locational area or indoor system ID information or both.”**

H. “location register” and “the location register”

| <u>Disputed Term</u> | <u>Plaintiff’s Proposal</u> | <u>Defendants’ Proposal</u> |
|-------------------------|---|---|
| “location register” | This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction. | “register that records a current location of a data communication subscriber” |
| “the location register” | This term is not indefinite, does not lack antecedent basis, and is enabled and discernible in the context of the claim. A person of ordinary skill in the art would understand the scope of what is claimed. | Indefinite. |

1. The Parties’ Positions

The Parties dispute whether the term “location register” should be construed. The Parties also dispute whether the term “the location register” is indefinite. Plaintiff argues that a location register has a plain and ordinary meaning to a person of ordinary skill in the art. (Dkt. No. 62 at 19 (citing Dkt. No. 62-10 at ¶¶ 188, 199).) Plaintiff also argues that the term “the location register” is not indefinite, because the body of Claim 1 clearly recites a location register (third element). (*Id.* at 19-20 (citing ’728 Patent at Claim 1, 15:31).) Plaintiff further argues that the next recitation of *the* location register therefore clearly refers to this location register. (*Id.* at 20.) Plaintiff contends that Defendants’ argument that “a location register” appears in the preamble is flawed, because antecedent basis is found in the body of the claim, not the preamble. (*Id.*)

Plaintiff further argues that Defendants’ expert never opined that the claims failed to describe a structurally complete invention. (*Id.* (citing Dkt. No. 62-5 at 105:7–107:5).) According to Plaintiff, there is no confusion as to the technical understanding of “location register.” (*Id.* (citing Dkt. No. 62-10 at ¶¶ 187–191, 193–194, 196–199; Dkt. No. 62-5 at 101:8–11).) Plaintiff also contends that the specification provides ample descriptions establishing that this term is definite. (*Id.* at 21 (citing ’728 Patent at Abstract, 3:9–15, 3:39–46, 3:51–4:27, 4:23–24, 6:34–47,

6:47–53, 7:40–42, 7:44–50, 7:66–8:6, 8:31–43, 9:13–16, 9:17–20, 9:47–53, 9:54–67, 10:44–46, Figures 1a, 1b, 2, 3-6).) According to Plaintiff, Defendants’ expert proffers no analysis or opinion of these parts of the specification. (*Id.* (citing Dkt. No. 62-6 at ¶¶ 35–40; Dkt. No. 62-5 at 108:5–111:13).)

Defendants respond that the specification describes the “location register” as a register that records a current location of a data communication subscriber. (Dkt. No. 67 at 15 (citing ’728 Patent at 9:12–15, 3:9–13, 7:66–8:3, 14:28–31).) Defendants argue that the location register records the data communication subscriber’s location “in order to confirm as to whether the user of the wireless internet terminal is located indoors or outdoors.” (*Id.* (citing ’728 Patent at 3:9–13).) According to Defendants, this is a highly technical term whose “agreed-upon” meaning should be provided to the jury. (*Id.* at 16.)

Regarding the term “the location register,” Defendants argue that the term is indefinite. Defendants contend that Claim 1 recites “a location register” twice, once in the preamble and again in the body. (*Id.* at 24-25.) Defendants argue that Claim 1 recites two location registers, one of which must be part of the outdoor network with no limitation on its storage (preamble) and the other with no set association but that must store specific location information (body). (*Id.* at 25.) According to Defendants, the claim is not reasonably certain to a person of ordinary skill in the art how the second instance of “a location register” relates, if at all, to the first. (*Id.* (citing at Dkt. No. 67-2 at ¶ 36).) Defendants also argue the final limitation of Claim 1 recites: “a router that determines the location of the data communication terminal stored in the location register.” (*Id.*) Defendants contend that it is unclear whether “the location register” is referring to the one recited in the preamble or in the third element of the body of the claims. (*Id.* at 25-26.) Defendants also contend that Dependent Claims 4, 5, and 6 similarly recite “the location register” without

specifying which of the “location registers” required by the independent claim they refer to. (*Id.* at 26.)

Defendants also argue that the specification includes embodiments in which a location register is located in the outdoor network, as well as an embodiment in which a location register is located in an “external network.” (*Id.*) According to Defendants, the specification confirms that the “location register” introduced in the body of the claims and in the dependent claims may or may not be located in the outdoor network. (*Id.*) Defendants also contend that the preamble here is limiting because it provides antecedent basis for other terms in the body of the claim. (*Id.* at 26-27.) Finally, Defendants argue that “location register” by itself is amenable to construction, but the antecedent basis issue arises because there is ambiguity in the use of “the location register” in the claims. (*Id.*)

Plaintiff replies that Defendants proffer no reason why any affirmative construction should be imported from the specification and embodiments. (Dkt. No. 68 at 4.) Plaintiff argues that Defendants want the preamble to be limiting so they can create an antecedent ambiguity for “the location register.” (*Id.*) Plaintiff contends that the body of the claim describes a structurally complete invention. (*Id.*) According to Plaintiff, a person of ordinary skill in the art would not be confused by antecedent basis or need the preamble to understand the invention. (*Id.* at 5.) Plaintiff argues that there is no ambiguous “third” network. (*Id.*) Plaintiff further contends that Claim 1 is a system claim that recites the required components. (*Id.*) According to Plaintiff, the system switches connections between two different recited networks, but does not preclude the presence of additional networks. (*Id.*) Plaintiff argues that there is no evidence or rationale to limit the claims to a particular embodiment’s design of the system for the location register. (*Id.*)

2. Analysis

The term “location register” relates to asserted Claims 1, 4–6, 12, and 14 of the ’728 Patent. The term “the location register” relates to asserted Claims 1–3, 5–7, and 9–11 of the ’728 Patent. The Court finds that the terms are used consistently in the claims and are intended to have the same general meaning in each claim. The Court further finds that the term “location register” should be construed to mean “register that records the location of the data communication terminal.” The specification states that “in order to connect with the outdoor wireless LAN network or to utilize a roaming service through the outdoor wireless LAN network, a current location of a mobile host, i.e. the data communication terminal, should be stored in the location register.” ’728 Patent at 9:12–15, 3:9–13, 7:66–8:3, 14:28–31. This is important because if the user moves outdoors and “the PDA 10 cannot receive the indoor system ID information broadcasted from the indoor gateway 100,” the PDA can “go through the authentication of the current location by the location register 80 to register its current location into the location register through the outdoor wireless internet network (step S67, S68, S69).” ’728 Patent at 14:26–32.

The Court finds it necessary to provide a construction because it appears that the experts disagree on the plain and ordinary meaning of the term. Although Plaintiff argues that the experts do not dispute the term has a plain and ordinary meaning, Plaintiff also argues that its expert did not agree to Defendants’ construction. (Dkt. No. 68 at 4.) Accordingly, the Court construes the term to resolve the Parties’ dispute and clarify the term’s meaning for a jury. *See O2 Micro Int’l v. Beyond Innovation Tech.*, 521 F.3d 1351, 1362–63 (Fed. Cir. 2008) (“When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.”). The Court does not adopt Defendants’ construction in its entirety because it is limited to an embodiment (*i.e.*, a subscriber network).

Defendants also argue that the term is indefinite because Claim 1 recites “a location register” twice. Specifically, “a location register” is recited in the preamble and in the body of the claim. According to Defendants, “[i]t is not reasonably certain to a POSA (1) whether the two location registers can, must, or must not be one and the same, and (2) whether subsequent references to ‘the location register’ in claim 1 and its dependents refer back to the first or second recitation of ‘a location register’ (or both).” (Dkt. No. 67 at 25.)

The Court finds that the body of Claim 1 describes a structurally complete invention. The claim recites *a* location register in the body, which is the antecedent basis for the subsequent recitation of *the* location register. ’728 at 15:31, 15:35. A person of ordinary skill in the art would not be confused by antecedent basis or need the preamble to understand the invention. *See Catalina Mktg. Int’l v. Coolsavings.com, Inc.*, 289 F.3d 801, 810 (Fed. Cir. 2002) (finding no preamble limitation because “applicant did not rely on this phrase to define its invention nor is the phrase essential to understand limitations or terms in the claim body.”).

Specifically, the system recited in Claim 1 switches connections between two different networks, and does not preclude the presence of additional networks. For example, Figures 1a, 1b, and 2 illustrate multiple configurations with a location register in a home agent and/or foreign agent. The location register is operably connected to the router, BTS, and BSC. ’728 Patent at 6:34–53, 7:44–50, 8:31–42. The specification further states that “[t]he location register 80 controls a path of the incoming messages or voice data transmitted to the internet 50.” *Id.* at 10:44–46; *see also id.* at Figures 3–6. One embodiment describes how the “location register may be a home agent or a foreign agent, and uses a mobile IPv4 or IPv6 address system in order to store the location.” *Id.* at 8:3–9. Accordingly, the Court finds that Defendants have failed to prove by clear and convincing evidence that the term is indefinite. Finally, in reaching its conclusion, the Court has

considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

For the reasons set forth above, the Court construes the term **“location register”** to mean **“register that records the location of the data communication terminal.”** The Court further finds that the term **“the location register”** is not indefinite.

I. “the indoor wireless connection module”

| <u>Disputed Term</u> | <u>Plaintiff's Proposal</u> | <u>Defendants' Proposal</u> |
|---|---|-----------------------------|
| “the indoor wireless connection module” | This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction. | Indefinite. |

1. The Parties' Positions

The Parties dispute whether the term “the indoor wireless connection module” is indefinite for lacking sufficiently clear antecedent basis. Plaintiff argues that Claim 1 recites that the separate data communication terminal and separate indoor gateway includes an indoor wireless connection module. (Dkt. No. 62 at 28.) Plaintiff also argues that Figure 2 depicts a module in the terminal (“A”) and a module in the gateway (“C”). (*Id.*) Plaintiff contends that a person of ordinary skill in the art would readily understand wireless communications are made through these wireless connection modules. (*Id.* (citing Dkt. No. 62-10 at ¶¶ 251–254).)

Defendants respond that Claim 1 recites “an indoor wireless connection module” in “a data communication terminal” and in “an indoor gateway.” (Dkt. No. 67 at 27.) Defendants argue that Claim 1 then recites that the “indoor gateway . . . makes wireless communications with the data communication terminal through the indoor wireless connection module.” (*Id.*) Defendants contend that it is not reasonably certain to a person of ordinary skill in the art to which of the two

recited indoor wireless connection modules the phrase “the indoor wireless connection module” refers. (*Id.* at 28 (citing Dkt. No. 67-2 at ¶¶ 41–43).) Defendants further argue that Dependent Claims 9 and 11 recite “the indoor wireless connection module” without specifying which of the two indoor wireless connection modules in Claim 1 is being referenced. (*Id.* (citing Dkt. No. 67-2 at ¶ 44).) Defendants contend that the different paths of communication through either or both of the indoor wireless connection modules affects the claim scope. (*Id.* (citing ’728 Patent at 2:52–54, 3:23–46, Figure 2).)

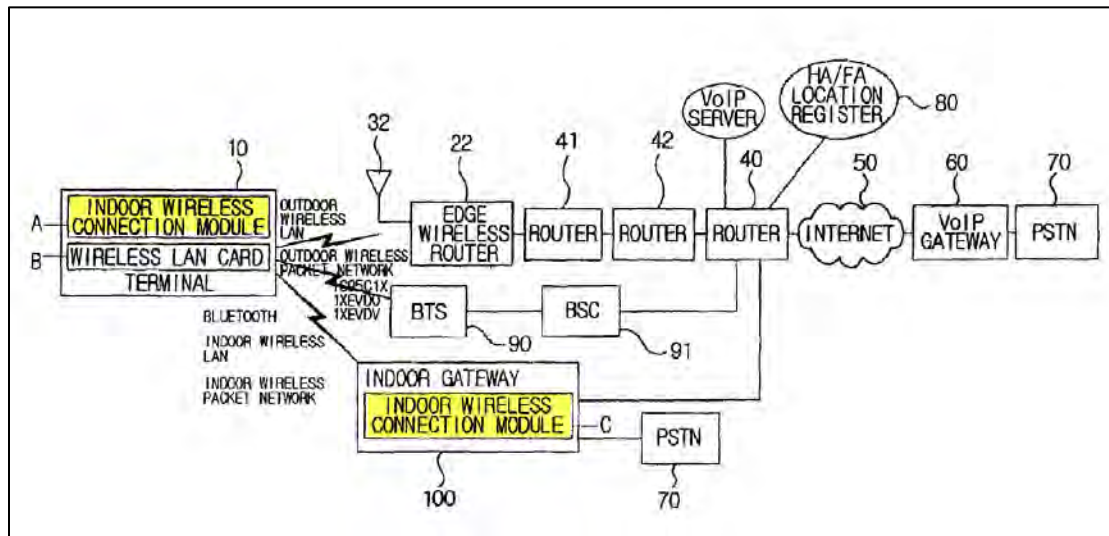
Defendants also argue that Plaintiff ignores the ambiguity in the claim language and arbitrarily chooses one of the multiple plausible interpretations. (*Id.*) Defendants contend that the issue is “not that the standalone term . . . is indefinite—rather, [the issue is] that the phrase ‘the indoor wireless connection module’ is indefinite in the context of the claims.” (*Id.* (citing Dkt. No. 67-3 at ¶ 47).) Defendants also argue that Plaintiff improperly imports limitations from the specification. (*Id.*)

Plaintiff replies that Defendants’ entire argument rests on a grammatical mischaracterization. (Dkt. No. 68 at 8-9.) Plaintiff argues that a person of ordinary skill in the art would readily understand that Claim 12 may include additional modules, and that Claim 15 requires that each of the DCT and indoor gateway houses a connection module. (Dkt. No. 68 at 9.) Plaintiff further contends that the indoor wireless connection module refers to the connection module recited in the immediately preceding line. (*Id.*)

2. Analysis

The term “the indoor wireless connection module” relates to asserted Claims 1–3, 5–7, and 9–11 of the ’728 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The Court further finds that the term is

not indefinite, because it has sufficiently clear antecedent basis. Claim 1 recites that both the data communication terminal and the indoor gateway include “an indoor wireless connection module.” This is illustrated in Figure 2, which depicts a module in the data communication terminal (“A”) and a module in the indoor gateway (“C”).



’728 Patent at Figure 2 (highlighted added). The specification states the following regarding Figure 2:

The data communication terminal 10 is, for example, the PDA, the notebook PC, or the like. It includes an indoor wireless connection module A and a wireless LAN card B (or wireless packet connection module) therein, and stores information on at least one indoor system ID. Further, the indoor gateway 100 includes an indoor wireless connection module C therein, and its own unique system ID, i.e. indoor system ID information, is assigned thereto.

Id. at 8:52–55. The specification further states that wireless communications are made through these wireless connection modules. *See, e.g., Id.* at 10:26–31 (“[I]f the PDA 10 is set to be in the Bluetooth mode, the PDA 10 is connected with the indoor gateway 100 in accordance with the indoor system ID information and makes wireless communications with the indoor gateway 100 through the Bluetooth modules A, C (step 515).”); 11:56–59 (“[T]he PDA 10 is connected with the indoor network in accordance with the indoor system ID information and makes wireless

communications with the indoor gateway 100 through the Bluetooth modules A, C (step 525).”); 12:1–5 (“[T]he indoor gateway 100 transmits the internet incoming service information to the PDA 10 through the Bluetooth modules C, A, so that the user can continuously use the internet service with the PDA 10 (step 527).”).

Defendants do not dispute that a person of ordinary skill would understand that these modules facilitate wireless communications. Indeed, the specification states that “a Bluetooth module, a wireless LAN connection module, a wireless packet communication connection module, and the like may be used as the indoor wireless connection module.” *Id.* at 3:5–8. Instead, Defendants argue that “[i]t is not reasonably certain to a POSA to which of the two recited indoor wireless connection modules the phrase ‘the indoor wireless connection module’ refers.” (Dkt. No. 67 at 28.) Defendants also contend that “dependent claims 9 and 11 recite ‘the indoor wireless connection module’ without specifying which of the two indoor wireless connection modules in claim 1 is being referenced.” (*Id.*)

The problems with Defendants’ argument is that it confuses what a claim *requires* versus what it may also *comprise*. See *Crystal Semiconductor Corp. v. TriTech Microelects. Int’l*, 246 F.3d 1336, 1348 (Fed. Cir. 2001) (“[T]he transition ‘comprising’ creates a presumption that the recited elements are only a part of the device, that the claim does not exclude additional, unrecited elements.”). Specifically, a person of ordinary skill in the art would understand that *the* indoor wireless connection module recited in claim 1 refers to the connection module recited in the immediately preceding lines. Moreover, nothing in the claims preclude additional modules, or communication through additional modules. As discussed above, the specification states that wireless communications can be made through both wireless connection modules. Accordingly, the Court finds that Defendants have failed to prove by clear and convincing evidence that the

term is indefinite. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

For the reasons set forth above, the Court construes finds that the term **“the indoor wireless connection module”** is not indefinite, and will be given its plain and ordinary meaning.

J. “mobile IP”

| <u>Disputed Term</u> | <u>Plaintiff's Proposal</u> | <u>Defendants' Proposal</u> |
|----------------------|---|---|
| “mobile IP” | <p>This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction.</p> <p>This term is not indefinite, does not lack antecedent basis, and is enabled and discernible in the context of the claim. A person of ordinary skill in the art would understand the scope of what is claimed.</p> | <p>This term should have its understood meaning at the time of the application for the '728 patent, i.e., as set forth in RFC 2002 (including updates RFC 2290 and RFC 2794).</p> |

1. The Parties' Positions

The Parties dispute whether the term “mobile IP” refers to specific protocols or standards supporting mobility of data communication terminals. Plaintiff argues that Defendants' basis for reading RFC 2002 into the claims is that the examiner cited a prior art reference, U.S. Patent. No. 6,731,621 (“Mizutani”), which mentions RFC 2002. (Dkt. No. 62 at 22 (citing Dkt. No. 62-5 at 61:8–62:7; Dkt. No. 62-6 at ¶ 30).) Plaintiff further argues that a reference does not control claim construction because it was cited by the Examiner. (*Id.*) Plaintiff contends that Mizutani is not cited or incorporated by reference in the specification, and “RFC 2002” is never mentioned in the patent. (*Id.*)

Plaintiff also argues that the specification avoids naming a specific standard for mobile IP.

(*Id.* (citing '728 Patent at 7:44–50; Dkt. No. 62-10 at ¶¶ 226–227).) Plaintiff contends that Defendants have proffered no evidence that RFC 2002 was the only mobile IP standard at the time of the invention. (*Id.* at 23 (citing Dkt. No. 62-5 at 76:15–20, 80:2–12).) Plaintiff further contends that RFC 2002 was only one of several mobile IP protocols envisioned at the time of the invention. (*Id.* at 23-24 (citing Dkt. No. 62-10 at ¶¶ 218–221, 228; Dkt. No. 62-5 at 72:7–13).) Finally, Plaintiff argues that Defendants' construction is also deficient because it is unclear, and fails to give the jury any reasonable guidance. (*Id.* at 24.)

Defendants respond that the term “mobile IP” in the specification refers to specific protocols or standards supporting mobility of data communication terminals. (Dkt. No. 67 at 17-18 (citing '728 Patent at 7:44–49, 9:13–15).) According to Defendants, “mobile IP” must be limited to the standards/protocols in existence at the time of the '728 Patent's application. (*Id.* at 18.) Defendants argue that “mobile IP” referred to a specific protocol standardized by the IETF (RFC 2002) and two supplements (RFC 2290 and RFC 2794). (*Id.* (citing Dkt. No. 67-2 at ¶ 29).) Defendants contend that Mizutani refers to RFC 2002 as “mobile IP.” (*Id.* (citing Mizutani at 1:47–52).) Defendants further contend that RFC 2002 was referred to as “Mobile IP” in many contemporaneous industry documents. (*Id.* (citing Dkt. No. 67-2 at ¶¶ 30, 31).)

Defendants also argue that Plaintiff's expert admitted he was not able to provide any examples of any other mobile IP protocols that existed at the time of application for the '728 Patent. (*Id.* at 19 (citing Dkt. No. 67-5 at 233:1–10, 235:22–236:3, 228:4–236:3).) Defendants argue that claims covering protocols or standards are limited to the versions that existed at the time of the claimed invention. (*Id.*) Defendants also contend that Plaintiff has not identified any mobile IPv6 protocols in existence when the application for the patent was filed. (*Id.*) Defendants argue that Plaintiff cannot generically claim all present and future iterations of anything that could be

described as “mobile IP.” (*Id.*)

Plaintiff replies that Defendants know that their assertion that RFC 2002 was the only mobile IP protocol known to a person of ordinary skill in the art is factually inaccurate. (Dkt. No. 68 at 5.) Plaintiff argues that Defendants cite no authority to override plain meaning when the specification never mentions the standard, and not one of the experts opines that the standard was the only understanding of the term. (*Id.*) Plaintiff contends that the ’728 Patent makes no reference to mobile IP standards, and does not require compliance with a standard. (*Id.*) According to Plaintiff, Defendants’ expert admitted that a person of ordinary skill in the art could implement mobile IP without relying on RFC 2002. (*Id.* at 6 (citing Dkt. No. 62-5 at 72:7–13; 83:12–14, 84:17–85:14).) Plaintiff argues that “mobile IP” is a technical term of art to a person of ordinary skill in the art that is not exclusive to RFC 2002. (*Id.* at 7.)

2. Analysis

The term “mobile IP” relates to asserted Dependent Claims 4 and 5 of the ’728 Patent. The Court finds that the term is used consistently in the claims and is intended to have the same general meaning in each claim. The Court further finds that the term should be given its plain and ordinary meaning. Dependent Claim 4 recites “wherein the data communication terminal informs the location register that the terminal is located indoors by registering its location into the location register *using a mobile IP* if the registered indoor system ID information is received.” The specification states the following regarding the use of a mobile IP service:

The mobile IP supports mobility of the host by using mobile agents such as a foreign agent (FA) and a home agent (HA), periodic registration of the host's location by the home agent, and tunneling between the mobile agents or between the home agent and the mobile host. *A unique IP address* must be assigned to the mobile host (*i.e. the data communication terminal*) for *using the mobile IP service*.

’728 Patent at 8:7-13 (emphasis added). Accordingly, a person of ordinary skill in the art would understand that the plain and ordinary meaning of “using a mobile IP” includes using a unique IP

address.

Defendants seeks to limit this term to one specific standard/protocol in existence at the time of the '728 Patent's application. (Dkt. No. 67 at 17-18.) According to Defendants, "mobile IP" referred to a specific protocol standardized by the IETF (RFC 2002) and two supplements (RFC 2290 and RFC 2794). (*Id.* at 18.) Defendants concede that the specification does not refer to RFC 2002 by name. (*Id.*) Instead, Defendants' only basis for reading RFC 2002 into the claims is the examiner's cite to Mizutani, which mentions RFC 2002. (Dkt. No. 62-5 at 61:8–62:7; Dkt. No. 62-6 at ¶ 30.) From this tenuous reference, Defendants argue that claims covering protocols or standards are limited to the versions that existed at the time of the claimed invention. (Dkt. No. 67 at 19.)

The Court finds that a standard mentioned in a piece of prior art cited by the examiner does not limit the disputed term. As Defendants concede, Mizutani is not cited or incorporated by reference in the specification of the '728 Patent, and "RFC 2002" is never mentioned in the specification of the '728 Patent. (*See, e.g.*, Dkt. No. 62-5 at 61:2–7, 63:12–21.) Simply stated, there is no indication that the patentee adopted the RFC 2002 protocol for mobile IP. The specification makes no reference to mobile IP standards, let alone RFC 2002, and does not require compliance with a standard. Moreover, Defendants' construction is also deficient because it is unclear. Based on the evidence before the Court, RFC 2002 is a 79-page technical document. (*See, e.g.*, Dkt. No. 62-7). Simply asserting that the term "mobile IP" should be construed "as set forth in" this document fails to give the jury any reasonable guidance. *See, e.g., ESN, LLC v. Cisco Sys., Inc.*, No. 5:08-CV-20-DF, Dkt. No. 102 at 17-18 (E.D. Tex. July 14, 2009) (declining to construe "SIP" (session initiation protocol) to mean "[SIP] as set forth in IETF RFC 2543"). Accordingly, the Court rejects Defendants' construction. Finally, in reaching its conclusion, the Court has

considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court's Construction

For the reasons set forth above, the term “**mobile IP**” will be given its **plain and ordinary meaning**.

K. “a second step of determining whether when indoor system ID information is received by the data communication terminal and the received indoor system ID information is identical to indoor system ID information stored in the location register”

| <u>Disputed Term</u> | <u>Plaintiff's Proposal</u> | <u>Defendants' Proposal</u> |
|--|---|-----------------------------|
| “a second step of determining whether when indoor system ID information is received by the data communication terminal and the received indoor system ID information is identical to indoor system ID information stored in the location register” | This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction. This term is not indefinite, does not lack antecedent basis, and is enabled and discernible in the context of the claim. A person of ordinary skill in the art would understand the scope of what is claimed. | Indefinite. |

1. The Parties' Positions

The Parties dispute whether the inclusion of “whether when” in the second step of Claim 12 makes the claim indefinite. Plaintiff argues that a person of ordinary skill in the art would understand that this step determines whether (if) the indoor system ID information received by the data communication terminal is identical to the indoor system ID information stored in the location register, and makes that determination when the indoor system ID information is received by the data communication terminal. (Dkt. No. 62 at 28 (citing Dkt. No. 62-10 at ¶¶ 263–267; ’728 Patent at Abstract, 3:16–21, 3:67–4:5, 9:40–44, 10:1–9, 11:34–42, 12:59– 65).) Plaintiff further argues that the subsequent step (3) recites “if it is determined in the second step that the two of ID

information are equal to each other,” which informs a person of ordinary skill in that art that what is being determined is whether the received indoor system ID information is equal to the stored indoor system ID information. (*Id.* at 29.) Plaintiff contends that before the invention can determine whether the information is identical, it must have received the information to be compared. (*Id.*)

Defendants respond that there is no indication whether the patentee intended to include the word “whether” or “when.” (Dkt. No. 67 at 30.) Defendants argue that it is not reasonably certain whether the limitation requires determining whether something (*e.g.*, receiving system ID information) occurs (a binary determination) or when something occurs (a temporal determination), or both. (*Id.* (citing Dkt. No. 67-2 at ¶¶ 52, 53).) Defendants contend that the intrinsic record provides support for both embodiments. (*Id.* (citing ’728 Patent at 9:7–12, 3:32–34).)

Defendants argue that a person of ordinary skill in the art would not know whether the limitation requires determining “when indoor system ID information is received by the data communication terminal,” in relation to the disclosed predetermined time period, or determining “whether indoor system ID information is received by the data communication terminal” was received at all. (*Id.*) Finally, Defendants argue that Plaintiff rewrites the term, and that it is not the Court’s job to fix indefiniteness. (*Id.*)

Plaintiff replies that Defendants ignore the cited intrinsic evidence for the second step. (Dkt. No. 68 at 10.) Plaintiff argues that the specification and claims themselves inform a person of ordinary skill in the art that this step describes determining whether the received and stored indoor system ID information are identical when the information is received by the DCT. (*Id.*) Plaintiff contends that Defendants do not dispute that a person of ordinary skill in the art would

technically understand this step. (*Id.*)

2. Analysis

The phrase “a second step of determining whether when indoor system ID information is received by the data communication terminal and the received indoor system ID information is identical to indoor system ID information stored in the location register” relates to asserted Claims 12, 14, and 17–20 of the ’728 Patent. The Court finds that although the claim language is less than ideal, a person of ordinary skill in the art would understand that this step describes determining *whether* the received and stored indoor system ID information are identical *when* the information is received by the DCT. The third step in Claim 12 confirms this by reciting, “if it is determined in the second step that the two of ID information are equal to each other.” Likewise, the specification states that “[i]n order to determine whether the wireless internet terminal is located indoors or outdoors, the wireless internet terminal determines whether ID information of an indoor system broadcasted from the indoor gateway is received, and in particular, whether the received ID information of the indoor system is equal to the stored ID information.” ’728 Patent at 3:16–22, *see also id.* at Abstract, 9:40–44, 10:1–9, 11:34–42.

To clarify the phrase for the jury, the Court construes the phrase to mean “a second step of determining whether the received indoor system ID information is identical to indoor system ID information stored in the location register when indoor system ID information is received by the data communication terminal.” This clarification is very similar to the specification’s statement that “a second step of determining *whether* the received indoor system ID information is identical to indoor system ID information stored in the location register *when* indoor system ID information is received by the data communication terminal” ’728 Patent at Abstract (emphasis added).

Defendants argue that the inclusion of “whether when,” makes no sense and is therefore

indefinite. According to Defendants, “it is not reasonably certain whether the limitation requires determining whether something (e.g., receiving system ID information) occurs (a binary determination) or when something occurs (a temporal determination), or both.” (Dkt. No. 67 at 30.) The Court disagrees. As discussed above, a person of ordinary skill in the art would understand that the second step determines whether the received indoor system ID information is identical to indoor system ID information stored in the location register when indoor system ID information is received by the data communication terminal. This construction is correct because it comports with the claim language and the specification. *Funai Elec. Co. v. Daewoo Elecs. Corp.*, 616 F.3d 1357, 1372 (Fed. Cir. 2010) (“An ungainly claim is not thereby indefinite, when its meaning can be understood by a person experienced in the field of the invention, on review of the patent documents.”). Furthermore, the Court’s construction further clarifies the phrase for the jury. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court’s Construction

For the reasons set forth above, the Court construes the phrase **“a second step of determining whether when indoor system ID information is received by the data communication terminal and the received indoor system ID information is identical to indoor system ID information stored in the location register”** to mean **“a second step of determining whether the received indoor system ID information is identical to indoor system ID information stored in the location register when indoor system ID information is received by the data communication terminal.”**

L. “a fourth step of connecting with the internet network by switching connection of the data communication terminal from the outdoor wireless internet network to the indoor gateway and making wireless communications through the indoor gateway and an indoor wireless connection module”

| <u>Disputed Term</u> | <u>Plaintiff’s Proposal</u> | <u>Defendants’ Proposal</u> |
|--|---|--|
| “a fourth step of connecting with the internet network by switching connection of the data communication terminal from the outdoor wireless internet network to the indoor gateway and making wireless communications through the indoor gateway and an indoor wireless connection module” | This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction. This term is not indefinite, does not lack antecedent basis, and is enabled and discernible in the context of the claim. A person of ordinary skill in the art would understand the scope of what is claimed. | With respect to this limitation, this claimed “fourth step” must always and automatically occur upon completion of the claimed “third step,” but only when the quality of the indoor network is better than that of the outdoor wireless internet network after it is checked whether the quality of the indoor network is worse than that of the outdoor wireless internet network. |

1. The Parties’ Positions

The Parties dispute whether the fourth step of Claim 12 must “always and automatically” occur upon completion of the claimed third step of Claim 12. The Parties also dispute whether the fourth step should include the QoS embodiment. Plaintiff argues that Claim 12 recites specific ordering when intended. (Dkt. No. 62 at 29.) Plaintiff contends that there is no express ordering of the third and fourth steps. (*Id.* at 29-30 (citing Dkt. No. 62-5 at 139:1–6, 141:1–6, 137:24–138:7; Dkt. No. 62-10 at ¶¶ 272–274).) Plaintiff argues that Claim 12 does not require that the fourth step must always and automatically occur upon completion of the third step, or impose an intervening QoS step (*Id.* at 30.) Plaintiff further argues that the claim does not preclude intervening steps, and Defendants’ construction improperly excludes permitted intervening steps and improperly imports limitations from the embodiments. (*Id.*)

Defendants respond that the specification confirms that the claimed fourth step occurs after completion of the third step (Dkt. No. 67 at 21 (citing ’728 Patent at 10:9–21, 11:34–55, 13:8–19,

14:14–17, Figures 3–6.) Defendants argue that if the fourth step need not occur following the third step, then the third step’s authentication and storing of the indoor location would be meaningless. (*Id.* (citing Dkt. No. 67-2 at ¶¶ 58–60).) Defendants also contend that their construction does not preclude the occurrence of unclaimed operations between the third and fourth steps. (*Id.* at 22.) Finally, Defendants argue that the QoS embodiment is based on the quoted language in describing the “present invention.” (*Id.*)

Plaintiff replies that there is no express ordering for the fourth step. (Dkt. No. 68 at 10.) Plaintiff argues that Dr. Kelley explained that “storing” (third step) may precede “switching” in some instances, but that is not always the case. (*Id.* (citing Dkt. No. 62-10 at ¶ 141; ’728 Patent at 11:40–55).) Finally, Plaintiff contends that Defendants concede that they seek to import a QoS limitation from the specification, which the Federal Circuit prohibits. (*Id.*)

2. Analysis

The phrase “a fourth step of connecting with the internet network by switching connection of the data communication terminal from the outdoor wireless internet network to the indoor gateway and making wireless communications through the indoor gateway and an indoor wireless connection module” relates to asserted Claims 12, 14, and 17–20 of the ’728 Patent. The Court finds that the fourth step must occur after and not before the third step. Regarding the fourth step, the specification states the following:

According to the present invention for accomplishing the aforementioned objects, network paths (i.e. connection paths of a communication network) capable of connecting with the internet, a PSTN, or the like are switched depending on whether a user is located indoors or outdoors. That is, when the user is located indoors, a user’s wireless internet terminal is connected with an indoor-wired LAN through wireless communication module. Alternatively, when the user is located outdoors, the user’s wireless internet terminal is connected with an outdoor wireless internet network (a network which can be wirelessly connected with the internet) such as a wireless LAN network and a wireless packet network. Better communication quality with a lower cost is guaranteed to the user since the network connection can

be switched in accordance with the location or movement of the user. At this time, a roaming service is provided through an optimal network path depending on whether the user is located indoors or outdoors.

'728 Patent at 2:33–51. In describing the relationship between the third and the fourth step, the specification provides the flow chart illustrated in Figure 4, and states the following:

At this time, the PDA 10 goes through authentication by the location register 80 and registers its location into the location register 80 through the outdoor wireless LAN network.

Then, if the user moves indoors while making internet data communications or after finishing the internet data communications, the PDA 10 receives the indoor system ID information broadcasted from the indoor gateway 100 (step S22).

The PDA 10 compares the received indoor system ID information with the stored indoor network ID information to determine whether the PDA 10 has authority capable of using the indoor system. In addition, if it is determined that the received ID information is identical to the stored ID information, the location of the PDA 10 is registered into the location register 80 after going through the authentication by the location register through the outdoor or indoor wireless LAN network in accordance with the mobile IP message.

The location register 80 confirms from the registration data that the location of the user has changed from the outdoors to the indoors.

If the PDA 10 has gone through the authentication of location registration, the PDA 10 switches its own mode from the outdoor data communication mode to the Bluetooth mode (step S24).

Then, the PDA 10 is connected with the indoor network in accordance with the indoor system ID information and makes wireless communications with the indoor gateway 100 through the Bluetooth modules A, C (step S25).

Accordingly, data information transmitted from the PDA 10 is transferred to the indoor gateway 100 through the Bluetooth module A, and then, the indoor gateway 100 transfers the information to the internet 50 (step S26).

Id. at 11:30–63. Thus, the intrinsic evidence indicates that before the data communication terminal can be connected with the internet network (*i.e.*, the fourth step) there must be an authentication of indoor location of the data communication terminal (*i.e.*, the third step). Moreover, even if it was not expressly disclosed in the intrinsic evidence, it is common sense that the authentication

step must occur before the connecting step, otherwise the authentication step would be superfluous. That said, the Court rejects Defendants’ “always and automatically” language, because it implies that there can be no intervening unclaimed steps between the third and fourth steps.

Finally, the Court rejects Defendants’ attempt to import the QoS embodiment into the method claim. As discussed above, the “use of the phrase ‘the present invention’ does not ‘automatically’ limit the meaning of claim terms in all circumstances, and that such language must be read in the context of the entire specification and prosecution history.” *Netcraft*, 549 F.3d at 1398; *see also*, *Absolute Software*, 659 F.3d at 1336–37 (no waiver of broader scope “where the references to a certain limitation as being the ‘invention’ are not uniform, or where other portions of the intrinsic evidence do not support applying the limitation to the entire patent”). Here, the QoS embodiment is just an embodiment, and the claims should not be limited to this single embodiment. The specification further confirms this by stating that “it merely illustrates the preferred embodiments of the present invention only by way of examples. Thus, the present invention should not be limited thereto.” ’728 Patent at 15:2–5. Finally, in reaching its conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.

3. Court’s Construction

For the reasons set forth above, the Court finds that the fourth step is required to occur after and not before the third step. Otherwise, the plain and ordinary meaning applies. The Court expressly rejects Defendants’ “always and automatically” language, and also rejects reading the QoS embodiment into Claim 12.

M. “a seventh step of switching the connection of the data communication terminal from the indoor gateway to the outdoor wireless internet network and performing the first step again”

| <u>Disputed Term</u> | <u>Plaintiff’s Proposal</u> | <u>Defendants’ Proposal</u> |
|--|---|--|
| “a seventh step of switching the connection of the data communication terminal from the indoor gateway to the outdoor wireless internet network and performing the first step again” | This term has a plain and ordinary meaning to a person of ordinary skill in the art, and does not require construction. This term is not indefinite, does not lack antecedent basis, and is enabled and discernible in the context of the claim. A person of ordinary skill in the art would understand the scope of what is claimed. | With respect to this limitation, this claimed “seventh step” must occur upon completion of the claimed “sixth step.” |

1. The Parties’ Positions

The Parties dispute whether the seventh step of Claim 12 “must occur upon completion of the claimed ‘sixth step’” of Claim 12. Plaintiff argues the claim language neither requires that the seventh step must occur only upon completion of the sixth step, nor precludes intervening steps. (Dkt. No. 62 at 30.)

Defendants respond that their construction for the “seventh step” clarifies that it must occur after the sixth step. (Dkt. No. 67 at 22.) Defendants argue that if the sixth and seventh steps were permitted to occur in reverse order, the claim would depart from the “present invention” and every embodiment. (*Id.* (citing ’728 Patent at 4:15–22, 9:40–44, 11:25–29, 13:42–60; Dkt. No. 67-2 at ¶¶ 61–63). Finally, Defendants contend that their construction does not preclude intervening steps between the sixth and seventh step. (*Id.* (citing Dkt. No. 67-14 at 149:14–153:17).)

Plaintiff replies that Defendants point to no evidence that requires the specific ordering of the seventh step after the sixth step. (Dkt. No. 68 at 10.) According to Plaintiff, Defendants are effectively promoting the plain and ordinary meaning of these steps given their revised positions and caveats. (*Id.*)

2. Analysis

The phrase “a seventh step of switching the connection of the data communication terminal from the indoor gateway to the outdoor wireless internet network and performing the first step again” relates to asserted Claims 12, 14, and 17–20 of the ’728 Patent. The Court finds that the seventh step must occur after and not before the sixth step. In describing the relationship between the sixth and the seventh step, the specification provides the flow chart illustrated in Figure 5, and states the following:

Then, if the user moves outdoors, the PDA 10 cannot receive the indoor system ID information broadcasted from the indoor gateway 100 (step S38).

When the PDA 10 cannot receive the indoor system ID information, it is determined that the PDA 10 is located outdoors. Accordingly, the PDA 10 transmits the mobile IP registration message to the outdoor mobile communication network and goes through the authentication of a current location by the location register 80 to register its current location (step S39).

When the PDA 10 registers its location into the location register 80, the PDA 10 switches its own mode to the outdoor communication mode (step S40).

Then, the PDA 10 transmits the voice signals to the recipient through the outdoor wireless LAN network and receives the voice signals transmitted from the recipient through the outdoor wireless LAN network, so that the user and the recipient can continuously communicate with each other (step S41).

’728 Patent at 13:42–60. Thus, the intrinsic evidence indicates that before the data communication terminal can be switched from the indoor gateway to the outdoor wireless internet network (*i.e.*, the seventh step) there must be an authentication of an outdoor location of the data communication terminal (*i.e.*, the sixth step). Again, even if it was not expressly disclosed in the intrinsic evidence, it is common sense that the authentication step must occur before the connecting step, otherwise the authentication step would be superfluous. That said, the Court rejects Defendants’ “must occur upon completion of the claimed ‘sixth step’” language, because it implies that there can be no intervening unclaimed steps between the sixth and seventh steps. Finally, in reaching its

conclusion, the Court has considered the extrinsic evidence submitted by the Parties, and given it its proper weight in light of the intrinsic evidence.


3. Court's Construction

For the reasons set forth above, the Court finds that the seventh step is required to occur after and not before the sixth step. Otherwise, the plain and ordinary meaning applies. The Court expressly rejects Defendants' "must occur upon completion of the claimed 'sixth step'" language.

V. CONCLUSION

The Court adopts the constructions above for the disputed terms of the '728 Patent. Furthermore, the Parties should ensure that all testimony that relates to the terms addressed in this Order is constrained by the Court's reasoning. However, in the presence of the jury the Parties should not expressly or implicitly refer to each other's claim construction positions and should not expressly refer to any portion of this Order that is not an actual construction adopted by the Court. The references to the claim construction process should be limited to informing the jury of the constructions adopted by the Court.

So ORDERED and SIGNED this 17th day of April, 2020.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE